Abstract 37. Pediatric Orbital Floor Fractures: Clinical and Radiological Predictors of Tissue Entrapment and the Effect of Operative Timing on Ocular Outcomes

over free flaps for fear of impairing flap perfusion and/or assessment. In 2011 we described the use of NPDs over skin grafted free muscle flaps in 13 cases, showing favorable results.

METHODS: We performed a retrospective review of these cases performed at 2 institutions over a 6 year period.

RESULTS: The majority of flaps were for lower extremity trauma wounds (74), followed by upper extremity trauma wounds (8), scalp tumor defects (4), and one torso wound. There were 7 flap losses, but of these, 4 were due to non-compliance with postoperative immobilization/elevation orders; excluding these 4 failures for which the NPD was clearly not a factor, the flap success rate was 96.4%. Skin graft healing was uniformly excellent, with the exception of the above 7 cases, as well as 2 graft losses due to disruption during flap takeback, 2 partial graft losses due to infection, and 1 partial graft loss due to hematoma. In only one case (a scalp flap), the NPD was discontinued early, on postoperative day 1, due to inability to maintain a seal.

CONCLUSION: This series strongly suggests that NPDs do not contribute to free flap failure. While we do believe there are important technical caveats to NPD placement over free flaps, we feel that NPDs are safe, effective, and in many ways advantageous in this setting.

36.

COST ANALYSIS OF TWO STAGED IMPLANTS WITH ALLODERM AND DEEP INFERIOR EPIGASTRIC PERFORATOR FLAP AUTOLOGOUS RECONSTRUCTION

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PURPOSE: Two staged tissue expander-implant reconstruction with acellular matrix (TE/I+ADM) and deep inferior epigastric perforator flaps (DIEP) are the most common implant and autologous methods of reconstruction in the U.S. respectively. Implant based techniques are disproportionally more popular, partially due to their presumed cost effectiveness.

METHODS: We performed a comprehensive cost-utility analysis to compare (TE/I+ADM) and (DIEP). Medicare reimbursement costs for each procedure and their associated complications were calculated. Pooled probabilities of complications including cellulitis, seroma, skin necrosis, implant removal, flap loss, partial flap loss, and fat necrosis, were calculated using studies from 2010–2016.

RESULTS: The average cost for a successful TE/I+ADM and DIEP were $13,680.75 and $10,237.13 respectively. Incorporating pooled complication data from the published literature, an excess cost of $14,348.2 for TE/I+ADM and $11,395 for DIEP reconstruction was calculated. The expected costs for a successful TE/I+ADM and DIEP reconstruction were $9,974.63 and $7,395.30, significantly lower than the actual costs.

CONCLUSION: When comparing TE/I+ADM to DIEP flap reconstruction, DIEP flaps are more cost effective both at baseline and when factoring pooled complications and secondary procedures. These findings can be used to develop a decision analysis model when providing care to patients.

37.

PEDIATRIC ORBITAL FLOOR FRACTURES: CLINICAL AND RADIOLOGICAL PREDICTORS OF TISSUE ENTRAPMENT AND THE EFFECT OF OPERATIVE TIMING ON OCULAR OUTCOMES

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PURPOSE: To determine the clinical and radiological predictors of tissue entrapment in pediatric orbital floor fractures and to explore the effect of operative timing on ocular outcomes.

METHODS: We retrospectively reviewed the medical records of pediatric patients (aged <18 years) who acutely

presented with orbital floor fractures from October 2007 to October 2015.

RESULTS: 152 patients with 159 orbital floor fractures were included. 122 (80.3%) patients were male, and the mean age was 12.2 years. Twelve patients (7.9%) sustained orbital floor fractures with tissue entrapment. At presentation extraocular movement (EOM) restriction, diplopia, nausea, and vomiting were all associated with tissue entrapment (P<0.001). Amongst patients with trapdoor fractures, the presence of nausea and/or vomiting was predictive of tissue entrapment: positive predictive value 80%, negative predictive value 100%. For patients with tissue entrapment, poorer ocular outcomes (persistent EOM restriction and diplopia) were significantly associated with the length of operation (P=0.007), but not with the time interval to operation (P=0.146).

CONCLUSION: Nausea and vomiting are valuable predictors of tissues entrapment, particularly when EOM restriction and diplopia are equivocal. In our study, radiological findings were predictive of entrapment, but a lack of consistent language in this area limits the external validity of these results. Our study draws attention to the relationship between operation length and poorer ocular outcomes, suggesting that case severity/complexity and surgeon technique/experience may influence ocular outcomes.

38.

ATYPICAL PROLIFERATIVE LESIONS AFTER REDUCTION MAMMAPLASTY: INCIDENCE AND IMPLICATIONS IN 993 REDUCTIONS

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PURPOSE: Reduction mammoplasty occasionally reveals unsuspected proliferative lesions or carcinoma. Few studies examine incidence, risk factors, and outcomes in this population.

METHODS: Retrospective review was performed between 2000 and 2012. Pathology was categorized as benign, proliferative, or cancer (DCIS or invasive).

RESULTS: Five hundred seventy-three patients had 993 reduction mammaplasties (85% bilateral, 15% unilateral). Cancer was detected in 23 (2.3%) specimens and proliferative lesions in 148 (14.9%). Compared to patients with benign pathology, patients with proliferative lesions or cancer were older (p<0.001), with larger BMI (p=0.001), increased unilateral procedures (p<0.001) and more had a history of cancer (p<0.001). On multivariate regression analysis, age and prior breast cancer were independent risk factors for proliferative lesions (OR 1.057, CI 1.039–1.075, p<0.001 and OR 2.201, CI 1.291–3.752, p=0.004) and age significantly predicted cancer (OR 1.050, CI 1.009–1.093, p=0.015). There was no association with resection weight (p>0.5). Fifty-four percent of patients with proliferative lesions and no history of cancer had a change in management with increased surveillance, hormones, radiation, chemotherapy, or surgery. If there was a history of cancer, 31% had a change in management. Of patients with DCIS or cancer, all required treatment.

CONCLUSION: Proliferative lesions of the breast may be more common that previously reported. Age and a history of breast cancer increase risk for proliferative lesions. All should be referred to oncology.

39.

A COMPARISON OF OPEN VERSUS ENDOSCOPIC CARPAL TUNNEL RELEASE WITHIN THE SAME PATIENT

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PURPOSE: Several studies have shown less postoperative pain and faster improvement in grip and pinch strength with the endoscopic technique. The goal of this study was to prospectively examine subjective and functional outcomes, satisfaction, and complications after both ECTR and OCTR in the opposite hands of the same patient.

METHODS: This was a prospective, randomized study in which patients with bilateral carpal tunnel syndrome underwent surgical release with both endoscopic and open techniques. The initial operative approach utilized was randomly assigned to the more symptomatic hand. Demographic data